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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/820,861	03/30/2001	Harald Gustafsson	032927-003	3855

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EXAMINER	
LERNER, MARTIN	

ART UNIT	PAPER NUMBER
2654	

DATE MAILED: 08/02/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/820,861	GUSTAFSSON ET AL.	
	Examiner	Art Unit	
	Martin Lerner	2654	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *30 March 2001*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1 to 15* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1 to 15* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☒ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date *06/29/2001*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Specification

1. The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.

The following title is suggested:

Method and System for Hiding Location with Artificial Background Noise

2. The disclosure is objected to because of the following informalities:

On page 4, lines 3, 6, 14, and 18; on page 5, lines 5, 10, 14, 21, 26, 31, and 35; and on page 6, lines 10 and 19, the reference to claim numbers should be deleted. The Specification should not refer to claim numbers, as the issued claim numbers may not reflect the current claim numbers.

3. The Specification does not contain headings as is conventional under patent practice in the United States. (E.g. Background of the Invention, Summary of the Invention, Brief Description of the Drawings, Detailed Description of the Preferred Embodiments)

Appropriate correction is required.

Claim Objections

4. Claims 1 to 5 are objected to because of the following informalities:

In claim 1, lines 11 to 12, "and additional signal" should be –an additional signal—.

In claim 15, there should be a period at the end of the claim.

Appropriate correction is required.

Claim Rejections - 35 USC § 102

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

6. Claims 1, 2, 5, 6, 14, and 15 are rejected under 35 U.S.C. 102(e) as being anticipated by *Rousell et al.*

Regarding independent claims 1 and 6, *Rousell et al.* discloses a method and device for transmitting voice information, comprising:

"receiving said voice information from the environment of the device together with a first background sound" – voice signals 102 to be coded and transmitted in transmit signal processing have background noise (column 4, lines 22 to 65: Figures 2 and 3);

"generating a sound signal having a first signal part representing the voice information and a second signal part representing the first background part" – control processing performs noise estimate 332 and near end signal estimate 336 (column 4, lines 46 to 65: Figures 2 and 3);

"reducing the signal part representing the first background sound" – noise reduction circuit 308 performs noise reduction based upon noise estimate 332 and near end signal estimate 336 (column 4, lines 22 to 65: Figures 2 and 3);

"transmitting said sound signal through a communication channel to which the device is connected" – after speech coder 316 performs speech coding in transmit signal processing, the encoded speech signal is transmitted over a communication network to receive signal processing, where the encoded speech signal is subject to speech decoding 362 (column 4, line 66 to column 5, line 9: Figure 3);

"wherein the method further comprises the step of adding to said sound signal and additional signal representing a second background sound" – after noise reduction, a noise signal is injected into the communication signal at appropriate intervals (column 10, lines 6 to 28; column 10, line 55 to column 11, line 30).

Regarding claim 2, *Rousell et al.* discloses noise injection is performed within transmit signal processing ("in said electronics communication device") (column 10, line 55 to column 11, line 30: Figure 5).

Regarding claim 5, *Rousell et al.* discloses the noise reduction subsystem performs spectral subtraction of background noise (column 7, line 66 to column 8, line 4); the objective of noise reduction in spectral subtraction is to reduce the noise as much as possible ("is reduced to a level where the background sound is substantially removed").

Regarding claim 14, *Rousell et al.* discloses noise injection derives a noise model of stationary elements based upon non-linear processing (NLP) parameters to

accommodate various levels of muting or scrambling (column 10, lines 6 to 28); a control signal 510 indicative of the active/inactive state of the non-linear processor 504 is sent to a noise reduction controller 508 to control adaptation of the background noise model (column 11, lines 7 to 30: Figure 5); thus, the system "is adapted to select automatically" noise reduction ("said means for reducing the signal part representing the first background sound"), a background noise model, and noise injection ("means for adding an additional signal") based upon non-linear processing parameters ("to be enabled in dependence on parameters stored in the device").

Regarding claim 15, *Rousell et al.* discloses a consolidated noise injection system for mobile cellular telephony (column 9, line 9) and a wireless environment (column 13, lines 3 to 6) for a next generation voice processing system (NGVPS) incorporating voice-over-x (column 1, lines 19 to 24).

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

8. Claims 3, 7 to 9, and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over *Rousell et al.* in view of *Severson et al.*

Rousell et al. discloses injecting noise based upon a background noise model, but omits generating background noise by replaying a pre-recorded background noise

stored in the device, means for recording a background sound for storage, and playing back a smooth background sound and adding more distinct sounds at random instances. However, *Severson et al.* teaches a method for creating non-looped continuous sound made up of random sequencing of digital sounds. (Abstract) The objective is to generate continuous sound effects for backgrounds, such as seashore sounds and the sound of a crowd at a baseball game. (Column 1, Lines 20 to 31; Column 3, Lines 26 to 52) Random Sequenced Sound (RSS) is produced from pre-recorded fixed sound segments, and the sounds are stored in a library. (Column 7, Line 57 to Column 8, Line 8) Distinct sounds, such as a digital horn effect (column 6, lines 17 to 31) or a mooing of a cow (column 7, line 65 to column 8, line 31), are added at random instances. Implicitly, there is a means for recording a background sound stored in sound record memory 307 as pre-recorded fixed sound segments. (Figure 3) *Severson et al.* suggests a method of continuous sound by concatenating selected digital sound segments provides more realistic continuous sound effects for background sounds to model the continuity, variability, and logical progression of sounds heard in real life. (Column 1, Lines 20 to 31; Column 2, Lines 55 to 61) It would have been obvious to one having ordinary skill in the art to add pre-recorded background sounds stored by a sound record memory at random instances as taught by *Severson et al.* for the injected background noise of *Rousell et al.* in order to provide more realistic background noise.

9. Claims 7, 10, and 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over *Rousell et al.* in view of *Pelekis*.

Rousell et al. discloses injecting noise based upon a background noise model, but omits adding a background noise signal by playback of audio signals, and means for downloading and playing back audio files obtained online. However, *Pelekis* teaches an interactive remote control toy, where a read-only memory 28 digitally stores a variety of sound effects. (Column 3, Lines 51 to 67) Alternately, the sounds can be digitally recorded and played back as personalized messages, and may be downloaded and saved to recordable media via a global network, such as the Internet. (Column 4, Lines 1 to 30) It is well known that audio files can be downloaded from the Internet as an alternative to recording the audio files so as to facilitate interchange of audio files among a plurality of users. It would have been obvious to one having ordinary skill in the art to download and replay audio files obtained from the Internet as taught by *Pelekis* as the injected background noise of *Rousell et al.* for the purpose of facilitating interchange of audio files for background noise among a plurality of users.

10. Claims 4 and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over *Rousell et al.* in view of *Gardner*.

Regarding claim 4, *Rousell et al.* discloses noise injection is performed within a communication device, but does not expressly disclose that noise injection may be performed in the communication channel. However, it is well known to distribute functions at points within a telecommunication network for the purpose of optimizing

processing capabilities, e.g. at a base station, as an alternative to performing functions at a communication device. In fact, *Rousell et al.* shows a packet switched network after far end echo canceller 604 in Figure 6. It would have been obvious to one having ordinary skill in the art to distribute the noise injection of background noise within a communication channel in *Rousell et al.* instead of placing the noise injection within a communication device as an art recognized alternative because distributing telecommunication functions is well known for the purpose of optimizing processing capabilities.

Regarding claim 13, *Rousell et al.* does not expressly disclose that the user can select at the beginning of a call whether to enable background noise reduction and inject an additional signal. However, *Gardner* suggests a sound environment control apparatus, where a person can exercise control over sound environment by selectively isolating the listener from environmental sounds. By pushing buttons on a remote control unit, the user can turn off or turn down the volume on any or all of a wide variety of undesirable sounds in the environment. (Column 2, Lines 6 to 40) It would have been obvious to one having ordinary skill in the art to provide user control to the background noise reduction and noise injection of *Rousell et al.* as suggested by *Gardner* for the purpose of providing control to a user over environmental sounds.

Conclusion

11. The prior art made of record and not relied upon is considered pertinent to Applicants' disclosure.

Allen et al., Sharp, Kunugi et al., and Foladare et al. disclose related art.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Martin Lerner whose telephone number is (703) 308-9064. The examiner can normally be reached on 8:30 AM to 6:00 PM Monday to Thursday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Richemond Dorvil can be reached on (703) 305-9645. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

ML
7/20/04

Martin Lerner
Examiner
Group Art Unit 2654